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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/534,718

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Jose Reyes

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EXAMINER

SANDERS, KRIELLION ANTONETTE

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/534,718	Applicant(s) REYES, JOSE	
	Examiner Kriellion A. Sanders	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 74-84,93,97 and 99-105 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 74-84,93,97 and 99-105 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/05,8/05,9/06,3/07</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 74-84, 93, 97, 99-105 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. The claims are indefinite in the term, “activated intumescent flame retardant”. Applicant does not indicate in what manner the flame retardant are activated. The claims are indefinite in the terms, plastic resin, engineering resin and thermoset resin, as there is clear overlap in these components especially claims 81-83 wherein specific species such as polypropylene, (generic) and HDPE (specific) and polyesters, (generic) and polyethylene terephthalate (specific) are set forth.

4. At page 9 of applicant’s specification, applicant defines the intumescent flame retardant as being selected from the group consisting of activated melamine pyrophosphates, activated melamine polyphosphates, activated ethylene 5 diamine phosphate, activated ammonium polyphosphate, melamine, melamine phosphate, unactivated melamine pyrophosphates, unactivated melamine polyphosphate, melamine cyanurates and blends thereof. A preferred ratio of intumescent is 80:20 activated ethylene diamine phosphate to melamine phosphate. Examples of activated phosphate blends are Intumax AC2, Intumax AC3 WM, Intumax AC3, and Intumax M, all manufactured by 10 Broadview Technologies. Intumax products are free flowing white

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powders with nominal particle sizes preferably in the range of 3-20 microns, more preferably in the range of 3-5 microns. They have a high purity of 98% or higher, possess outstanding char forming capabilities, and have a specific gravity of approximately 1.2. Additionally, Intumax AC3 WM contains activated ethylene diamine phosphate and melamine phosphate.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 74-81-84, 93, 97, 99-105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wesch et al, US Patent No. 4,762,746 in view of Quenzi et al, US Patent No. 4,505,632, Keogh et al, US Pre Grant Patent Publication No. 2002/0098357 and Breant US Patent No. 6,025,423.

Wesch et al. discloses a fire resistant fire-retarding laminate includes foaming-agent layers combined with at least one restricting layer, which restrains expansion of the foaming-agent layer under heat and fire exposure and wherein said foaming agent layer may include epoxy resin and activated ammonium polyphosphate. The restricting layer may additionally include unactivated ammonium polyphosphate. See col. 1, lines 38-60, Example 1, col. 6, line 24 and the 5th line from the bottom lines and claims 1 and 8.

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Quenzi et al discloses activated ammonium polyphosphate and coating compositions capable of forming heat insulating layers comprising vinyl polymers and activated ammonium polyphosphate. The activated ammonium polyphosphate is obtained by reacting it with melamine and/or dicyandiamide or their derivatives at 100 degree to 200 degree C. and undergoes decomposition at an increased rate at temperatures within the range 300 degree to 600 degree C. Melamine is used in conjunction with the activated ammonium polyphosphate. See col. 1, lines 5-31 and Example 8.

Keogh et al discloses the technology of developing a fire resistant and thermal insulative cable wrap that comprises a supportive substrate coated or impregnated with an intumescent material. Application of said wrap in cable construction permits use of the lowest cost, highest performance cable components, namely, polyolefin resins as insulation and non-halogen flame retarded polyolefins as the jacket material. The intumescent coating is comprised of a thermosetting resin binder system of from about 5 parts to about 100 parts by weight of said intumescent material per 100 parts of said thermosetting resin. The intumescent material is Maxichar Activated Phosphate blend or Fyrol MP Melamine Phosphate or AC-2 Melamine Pyrophosphate alone or admixed with about an equal quantity of melamine resin. See paragraphs [0030] to [0042].

Cable compositions developed from polyamides and polyolefins are known in the art as disclosed by Breant. Flame retardant additives may be introduced into the cables. These may be intumescent systems which contain polyols, such as, for example, pentaerythritol, and products carrying nitrogen containing or phosphorus-containing functional groups, such as, for example,

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ammonium polyphosphate or melamine cyanurate. See col. 2, lines 50- 67, col. 4, line 53 through col. 5, line 15 and col. 6, lines 61-67.

The compositions of Wesch et al, Quenzi et al and Keogh et al comprise the same components as the presently claimed invention. Because a component and its properties are inseparable, the compositions of Wesch et al and Maurer et al are expected to possess UL-94 ratings of V-0 or V-1. Formulation of compositions in the manner disclosed by either reference with the expectation of achieving UL ratings of V-0 or V-1 would have been obvious to one of ordinary skill in the art at the time of applicant's invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122. The examiner can normally be reached on Monday through Thursday 8:30am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kriellion A. Sanders/

Primary Examiner, Art Unit 1796

Kriellion A. Sanders
Primary Examiner
Art Unit 1796

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